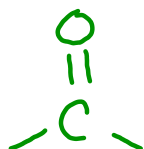


## Functional Groups

$\text{-OH}$  hydroxyl or hydroxy



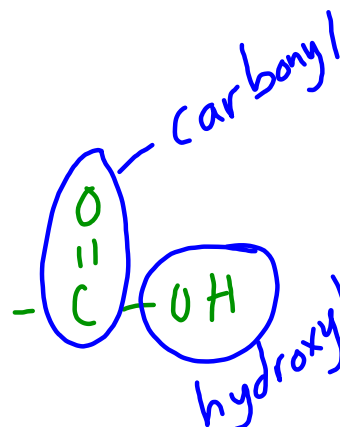
oxy



carbonyl



carboxyl



## Ethers

- A class of organic compounds in which oxygen is bonded to 2 carbon groups:  $\text{R-O-R}$  is formula
- Naming? The two R groups are alphabetized, and followed by "ether"
- Two R groups the same? Use the prefix di-
- Naming? Alkyl name "oxy" aliphatic name

## Ethers

- Diethyl ether is the one commonly called just "ether"
  - was the first reliable general anesthetic
  - dangerous- highly flammable, also causing nausea
- Dimethyl ether- will knock you out if inhaled
- ➡ ethers are fairly soluble in water

### 23.2 Alcohols and Ethers

#### *Connecting to Your World*

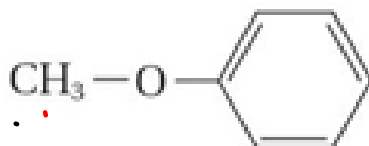
A patient does not experience pain during surgery when given a general anesthetic. The earliest anesthetics, used during the Civil War, belonged to a class of chemical compounds called ethers. You will read about the chemical characteristics of ethers that make them good anesthetics.



## Compound in which oxygen is bonded to two alkyl or aryl groups.



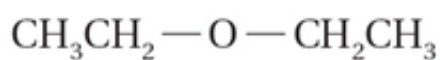
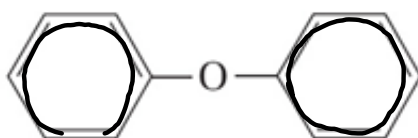
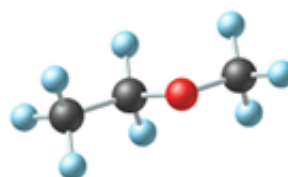
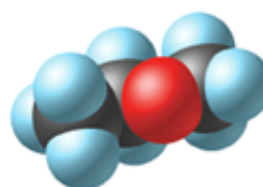
Methyl ether

Methylphenyl ether  
(anisole)Slide  
29 of 35

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## 23.2

## Alcohols and Ethers &gt; Ethers

Diethyl ether  
(ethyl ether)Diphenyl ether  
(phenyl ether)Slide  
30 of 35